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THE PLANTS OF THE MUSKEGS

Southeast Alaska



United States
Department of
Agriculture

PREPARED BY
Forest
Service

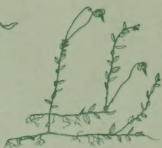
Alaska Region
Leaflet
R10-TP-17
1989



Marsh violet
(*Viola palustris*)
Lilac flower
5" tall



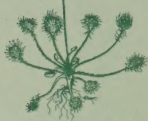
Arctic starflower
(*Trientalis europaea*)
White or pinkish white flower
2-14" tall



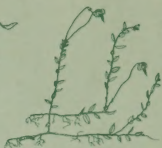
Sticky tofieldia
(*Tofieldia glutinosa*)
Yellowish green flower
To 16" tall



Roundleaf sundew
(*Drosera rotundifolia*)
White flowers
3" tall



Bog cranberry
(*Vaccinium oxycoccus*)
Red to pink flowers
with yellow stamens
Red edible berries
6" tall



LIKE A SOGGY BLANKET DRAPED OVER THE LANDSCAPE, muskeg covers more than 10 percent of southeast Alaska. It provides a surprisingly fragile home for an abundance of plants that thrive in the wet, acid soil. During the summer, the flowers on

many of them add a carpet of soft color to the muted greens and browns typical of muskeg.



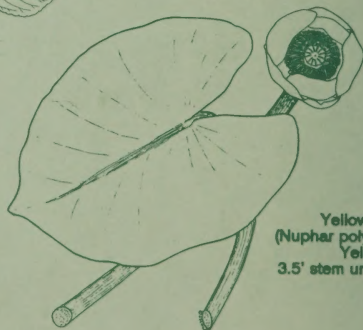
Crowberry
(*Empetrum nigrum*)
Blue-black edible berries
6" tall



Shore pine
(*Pinus contorta*)
5-40' tall



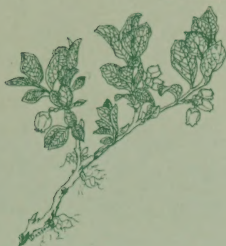
Buckbean
(*Menyanthes trifoliata*)
White to pink flower
12" tall



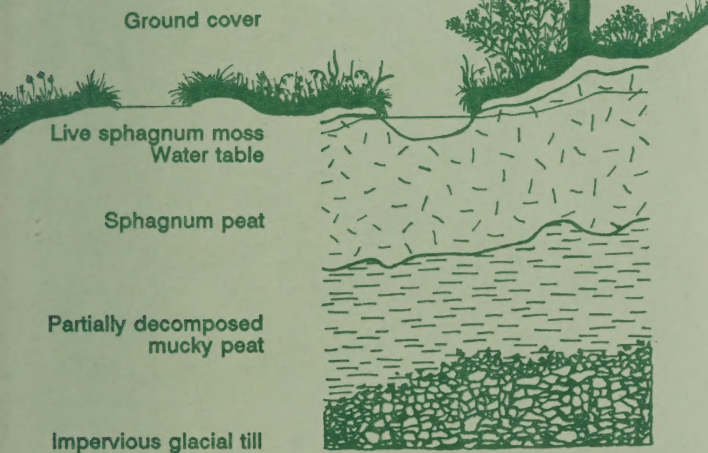
Yellow pond-lily
(*Nuphar polysepalum*)
Yellow flower
3.5' stem under water



Bog blueberry
(*Vaccinium uliginosum*)
White or pinkish flowers
8-16" tall



Muskeg itself consists of dead plants in various stages of decomposition, ranging from fairly intact sphagnum peat moss or sedge peat to highly decomposed muck. Pieces of wood, such as buried tree branches, roots, or whole trees, can make up 5 to 15 percent of the soil.



The water level in muskeg is usually at or near the surface. Stepping on muskeg is like stepping on a sponge, and walking across it involves avoiding the multitude of open ponds that range in size from potholes to small lakes. Despite their innocuous appearance, muskeg holes can be more than just messy - they can be dangerous. Some are quite deep and offer no footholds to help the unwary climb back out.

Mountain cranberry
(*Vaccinium vitis-idaea*)
Red edible berries
Pink flowers
2-6" tall

Individual
plant

Sphagnum moss
(*Sphagnum* spp.)
2-8" deep

Sphagnum moss is the mainstay of muskeg. It soaks up and holds 15 to 30 times its own weight in water. In the process, it keeps water from draining through the soil. So muskegs can form even on relatively steep slopes, especially in southeast Alaska's cold wet climate.

Trifoliate goldthread
(*Coptis trifolia*)
White pink-tinged flower
5" tall

Swamp gentian
(*Gentiana douglasiana*)
White and
bluish purple flowers
2-10" tall

Juniper
(*Juniperus communis*)
Blue-black berry-like cones
2-7' tall

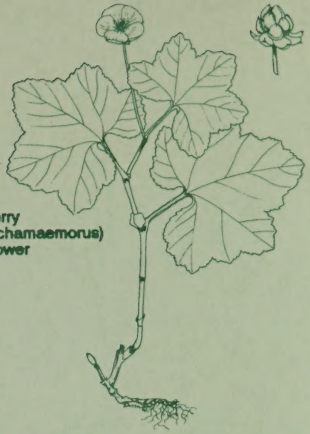
Marsh marigold
(*Caltha biflora*)
Yellow flower
12" tall

Sedge
(*Carex* spp.)
8-9" tall

Muskeg is so wet, acid, and infertile that about the only trees that grow in it are a few stunted shore pine (*Pinus contorta*). These may grow only 5 to 15' high and less than 10" around in 300 to 400 years.



Bog kalmia
(*Kalmia polifolia*)
Pink to purple flowers
20" tall shrub



Cloudberry
(*Rubus chamaemorus*)
White flower
12" tall

Muskegs need two conditions to develop: abundant rain and cool summers. A dead plant that falls on dry soil is attacked by bacteria and fungi and quickly rots. If that plant lands in water or on saturated soil, though, it faces a different fate. Air can't get to it, so the bacteria and fungi can't function well. The cool temperatures slow them down even more. All this slows decomposition, and the plant debris accumulates to form peat and eventually, a muskeg.



Bog orchid
(*Habenaria saccata*)
Green flower with purplish-brown tinge
6-40" tall



Deer cabbage
(*Fauria crista-galli*)
White flowers
14" tall

The Algonquin Indians gave the term "muskeg" to what the Scandinavians call a blanket bog. It's formed as peat accumulates and slows drainage, raising the water level and forming more peat. In some muskegs, the peat is 20' deep - or more.



Labrador-tea
(*Ledum groenlandicum*)
White flowers
1-5' tall



Common butterwort
(*Pinguicula vulgaris*)
Blue to violet flower
To 20" tall



Cotton grass
(*Eriophorus* ssp.)
White to cream fluff
4-36" tall

Basically, muskeg is a thin surface mat floating on a very soggy bog. When the surface layer is broken, whether by running three- or four-wheelers over it or by walking repeatedly over the same area, it's slow to heal. The scars are visible for many years. To prevent that damage, trails across muskegs are built on boardwalks, and people are urged to avoid muskegs with their vehicles.

Cover, profile, and sphagnum moss illustrations are by Carol Hoff, and the sedge and juniper illustrations are by Susan Kilka. All other illustrations are by Laura Dassow, and reproduced from the U.S. Forest Service publication: THE COMMON PLANTS OF THE MUSKEGS OF SOUTHEAST ALASKA, by O. Wayne Robuck, July 1985.

